

### REMARKS

Entry of this Amendment and reconsideration are respectfully requested in view of the amendments made to the claims and for the remarks made herein.

Claims 1-13 are pending and stand rejected.

Claims 1 and 12 are independent claims.

No claims have been amended.

Claims 1-5, 7, 9 and 11-13 stand rejected under 35 USC 102(b) as being anticipated by Aoki (USPPA 2002/0003520, referred to herein as D1). Claims 6 and 8 stand rejected under 35 USC 103(a) as being unpatentable over D1 in view of Koyama (USP no. 6,828,950, referred to herein as D2). Claim 10 stands rejected under 35 USC 103(a) as being unpatentable over D1.

With regard to the rejection of claims 1-5, 7, 9, and 11-13 as being anticipated by D1, applicant respectfully disagrees with and explicitly traverses the rejection of the claims.

As characterized in the specification of the instant application, D1 teaches "a hold type display device which holds a brightness of the antecedent picture until the subsequent signal is inputted to a pixel, wherein a frame displaying one picture is time divided into multiple sub-frames and the brightness of the subsequent sub-frame is attenuated at a designated ratio according to the brightness of the inputted picture. The thus obtained display device prevents a moving picture from being unclear and blurred and controls the lowering of the brightness in of the picture." (see pages 2-3).

D1 further teaches only two sub-frames with fixed brightness intensity ratio and with fixed time period. For example, para. 44 discloses the selection of the sub-frame periods as being based on the drive frequencies of the display device ("... each one frame (a term for displaying a picture) from the point of the antecedent picture signal being inputted to the point of the subsequent picture signal being inputted is 1/60 seconds. Since one frame is time-divided into two

sub-frames, each one frame means to be 1/120 seconds.)

Furthermore, D1 discloses that the brightness level in the second sub-frame is fixed (see para. 58, "... the brightness of the subsequent sub-frame is consistently one-fourth of that the antecedent frame."). D1 does disclose that the attenuation factor used to set the brightness level of the second sub-frame may be set as a function of the brightness level. See para. 61 "...the attenuation coefficient is fixed to 4. However, the attenuation coefficient F can be varied  $\{F=f(S_c)\}$  which varies according to the brightness  $(S_c)$ ."

Thus, in accordance with the teachings of D1 (as expressed in the first embodiment, for example,) there are two frames of the same size and the brightness level of the second sub-frame is a fixed (e.g.,  $\frac{1}{4}$ ) of the brightness level of the first sub-frame.

However, in establishing equal sized sub-frames and a brightness level of the second frame being a function of the brightness level, D1 notes that the pixel brightness is increased. (see para. 0059, "Comparing brightness  $\Sigma$  of one frame ..., with that of the pseudo impulse method, since  $\Sigma$  is calculated as below, wherein brightness of the antecedent frame is C and the attenuation coefficient is F

$$\Sigma = (C+C/F)C."$$

And para. 0060 "assuming that  $C=1$  and  $F=4$ , then  $\Sigma = 1.25$ . That is to say, brightness of one frame of the first embodiment is higher than the conventional pseudo impulse method by 25%. "

Hence, in establishing either the sub-frame size and/or the brightness level (i.e., the attenuation coefficient F) of the second sub-frame, D1 fails to provide any teaching regarding the claim element "wherein the first and second levels of brightness and associated sub-periods are selected so that the time averaged sum of said brightness levels  $(L_1, L_2)$  of said pixels within said at least

one subset (S) is substantially equal to said overall brightness level of said image." (emphasis added).

Rather, as shown above, D1 teaches that the sub-frames are selected to be in a ratio of 1:1, and the attenuation factor is selected based on the overall brightness, which then adds to the overall brightness level. Thus, the selected, or determined, sub-frames and brightness levels of D1 fail to provide for a brightness level that is "substantially equal to said overall brightness level of said image," as is recited in the claims. Instead the brightness level of D1 is greater than the initial overall brightness level.

A claim is anticipated by a prior art reference when the prior art reference teaches, either explicitly or implicitly, each and every element recited in the claims.

In this case, D1 cannot be said to anticipate the subject matter recited in the independent claims, and the claims dependent therefrom, as D1 fails to disclose at least one material element recited in the claims.

For the remarks made herein, applicant submits that the reason for the rejection of each of the aforementioned claims has been overcome as it has been shown that the subject matter recited in the claims is patently distinguishable from that which is taught in D1.

With regard to the rejection of claims 6 and 8 under 35 USC 103 as being unpatentable over D1 and D2, applicant respectfully disagrees with and explicitly traverses the rejection of the claims.

Claims 6 and 8 depend from claim 1, which has been shown to include subject matter not disclosed by D1.

D2 teaches a time-gray scale display system wherein one frame is divided into a plurality of sub-frames periods and an applied voltage is varied on a sub-frame basis. However, D2 fails to teach that either the number of sub-frames or

the applied voltage are selected in a manner “so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image.”

A claimed invention is prima facie obvious when three basic criteria are met. First, there must be some suggestion or motivation, either in the reference themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the teachings therein. Second, there must be a reasonable expectation of success. And, third, the prior art reference or combined references must teach or suggest all the claim limitations. However, the Court in *KSR v. Teleflex* (citation omitted) has held that the teaching, suggestion and motivation test (TSM) is merely to be used as a helpful hint in determining obviousness and a bright light application of such a test is adverse to those factors for determining obviousness enumerated in the *Graham v. John Deere* (citation omitted).

In this case, even if there were some motivation to combine the teachings of the cited references, the combination of D1 and D2 fails to disclose the claim element “so that the time averaged sum of said brightness levels (L1,L2) of said pixels within said at least one subset (S) is substantially equal to said overall brightness level of said image.”

Even if it could be said that D2 satisfies the aforementioned claim element, the incorporation of D2 into D1 would change the operating principles of D1 as D1 explicitly teaches increasing the brightness level of the pixel using the sub-frame.

Thus, the combination of D1 and D2 cannot be said to render obvious the subject matter recited in each of the aforementioned claims.

For the remarks made herein, applicant submits that the reason for the rejection of the aforementioned claims has been overcome as it has been shown that the subject matter recited in the claims is patently distinguishable from what is taught in D1 and D2, individually or in combination.

With regard to the rejection of claim 10 as being unpatentable over D1, applicant respectfully disagrees with and explicitly traverses the rejection of the claim.

Claim 10 depends from claim 1, which has been shown to be patently distinguishable over the teaching of D1.

Accordingly, claim 10 is also patently distinguishable over the teachings of D1 by virtue of its dependency upon an allowable base claim.

For the arguments presented, herein, applicant submits that the rejection of each of the claims has been overcome and respectfully requests that the rejections be withdrawn and a Notice of Allowance be issued.

Applicant denies any statement, position or averment stated in the Office Action that is not specifically addressed by the foregoing. Any rejection and/or points of argument not addressed are moot in view of the presented arguments and no arguments are waived and none of the statements and/or assertions made in the Office Action is conceded.

Applicant makes no statement regarding the patentability of the subject matter recited in the claims prior to this Amendment and has amended the claims solely to facilitate expeditious prosecution of this patent application. Applicant respectfully reserves the right to pursue claims, including the subject matter encompassed by the originally filed claims, as presented prior to this Amendment, and any additional claims in one or more continuing applications during the pendency of the instant application.

In the event the Examiner deems personal contact desirable in the disposition of this case, the Examiner is invited to call the undersigned attorney at the telephone given below.

No fees are believed necessary for the timely filing of this paper.

Respectfully submitted,  
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